UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,511	04/28/2001	Thomas Driemeyer	MENT-059	9067

45464   7590   03/21/2008
JACOBS & KIM LLP
1050 WINTER STREET
SUITE 1000, #1082
WALTHAM, MA 02451-1401

EXAMINER
FRINK, JOHN MOORE

ART UNIT	PAPER NUMBER
2142	

MAIL DATE	DELIVERY MODE
03/21/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/844,511	DRIEMEYER ET AL.
	Examiner	Art Unit	
	JOHN M. FRINK	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-30</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
~~Paper No(s)/Mail Date. 4/23/2002 and 6/11/2007~~

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed
> publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2.   Claims 1 and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by

Suits et al. (US 6,525,731 B1), hereafter Suits.

3.   Regarding claims 1 and 16, Suits shows a server and a computer program

product for use in connection with a network including at least one client and a

communication link interconnecting the client and server (col. 4 lines 1 – 2, col. 5 lines

47 - 55), the server comprising an image rendering module configured to render, from

three-dimensional scene data representing a scene, a two-dimensional image, and an

interface configured to transmit the two-dimensional image over the communication link

to the client (Fig. 4, col. 2 lines 41 - 56 and col. 4 lines 46 - 65).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 2 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suits in view of Smirnov et al. (US 6,570,578 B1), hereafter Smirnov.

3.   Regarding claims 2 and 17, Suits shows claims 1 and 16.

        Suits does not show a user interaction control module configured to control interactions with said at least one client in connections with rendering of the image from the scene data.

        Smirnov shows a user interaction control module configured to control interactions with said at least one client in connections with rendering of the image from the scene data (col. 11 lines 35 – 40 and col. 12 lines 45 – 61).

        It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Suits with that of Smirnov in order to further automate the rendering process (Smirnov, Abstract).

4.   Claims 3 - 7 and 18 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suits in view of Smirnov as applied to claims 2 and 17 above, and further in view of Rose et al. (US 6,538,654 B1), hereafter Rose.

5.   Regarding claims 3 and 18, Suits in view of Smirnov show claims 2 and 17, including where the image rendering module is configured to render images (Suits, col. 10 lines 46 -65).

        Suits in view of Smirnov do not show where said image rendering module is configured to render images from scene data representing a plurality of scenes, the user interaction control module being configured to select scenes for which images are to be rendered.

Rose shows where the image rendering module is configured to render images from scene data representing a plurality of scenes, the user interaction control module being configured to select scenes for which images are to be rendered (col. 21 lines 40 – 45).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Suits in view of Smirnov with that of Rose in order to provide more control to the user over the way the application behaves, as well as to ensure only the data in which the user is interested in is rendered (Rose, col. 21 lines 40 - 45).

6.   Regarding claims 4 and 19, Suits in view of Smirnov and Rose further show where the user interaction control module is configured to select scenes for which images are to be rendered in response to requests therefor (Rose col. 21 lines 40 – 45).

7.   Regarding claims 5 and 20, Suits in view of Smirnov and Rose further show where the requests are received from the at least one client (Suits col. 12 lines 42 – 50).

8.   Regarding claims 6 and 21, Suits in view of Smirnov and Rose further show where a request can contain scene customization information requesting at least one customization to the scene, the user interaction control module (Smirnov col. 12 lines 45 – 61) being configured to enable the image rendering module to render an image of the scene as customized in relation to the customization information (Suits col. 12 lines 42 – 50).

9.   Regarding claims 7 and 22, Suits in view of Smirnov and Rose further show where the at least one customization to the scene can be represented in images

rendered for selected ones of clients, the user interaction control module being configured to enable the image rendering module to control ones of the clients for whom images are rendered depicting the customization (Suits col. 10 line 60 - col. 11 line 35 and col. 12 lines 6 - 7).

10.   Claims 8 – 13 and 23 – 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suits in view of Smirnov as applied to claims 2 and 17 above, and further in view of French et al. (US 6,266,053 B1), hereafter French.

11.   Regarding claims 8 and 23, Suits in view of Smirnov show an operator generation module configured to generate, when the server is to render said image, an operator comprising at least one operator, said at least one operator being configured to enable said image rendering module to perform at least one operation in connection with rendering of the image (col. 9 line 42 – col. 10 line 14); and

        B. an event manager configured to control execution of said at least one operator in response to the occurrence of at least one event (Smirnov col. 12 lines 45 – 61 and col. 13 lines 39 – 47).

        Suits in view of Smirnov do not show where said operator generation module is an operator graph generation module.

        French shows utilizing scene graphs, including an operator graph generation module (col. 5 line 62 – col. 6 line 5 and col. 9 line 1).

        It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Suits in view of Smirnov with that of French in order

to utilize an advanced technique for better displaying scene information (French, Abstract).

12.   Regarding claims 9 and 24, Suits in view of Smirnov and French further show where the operator graph generation module comprises: A. a user manager module configured to select operators of selected operator types for use in the operator graph (Smirnov col. 3 lines 7 – 9, col. 9 line 40 – col. 10 line 14 and col. 12 lines 45 – 61), and

        B. a connection manager module configured to connect the selected operators into the operator graph (French col. 7 lines 51 – 55 and col. 9 lines 60 - 67).

13.   Regarding claims 10 and 25, Suits in view of Smirnov and French further show where scenes for which images are to be rendered are selected in response to requests therefor (French col. 19 lines 7 – 25) , and in which a request can include scene customization information requesting at least one customization to the scene (Suits, col. 12 lines 42 - 50 and Smirnov col. 9 lines 44 - 46), the user manager module (Smirnov col. 12 lines 45 – 61) being configured to select operators for use in the operator graph (French col. 9 line 1 and col. 9 lines 24 – 67) in response to the image requested by and scene customization information contained in a request (Suits col. 12 lines 42 – 50).

14.   Regarding claims 11 and 26, Suits in view of Smirnov and French further show where the image rendering module comprises:

        A. a scene database configured to store scene data representing at least a portion of the scene for which an image is to be rendered (Smirnov col. 13 lines 50 - 53)

        B. a customization module configured to customize the scene data contained in the scene database (Smirnov col. 9 lines 40 - 65 and col. 13 lines 50 - 59);

     C. a rendering engine module configured to utilize the scene data in the scene database in connection with rendering at least a portion of an image (Smirnov col. 13 lines 48 – 53); and

     D. a job manager module configured to control the customization module and the rendering module in connection with execution of said at least one operator in the operator graph (Smirnov col. 13 lines 2 – 50 and French col. 9 line 1 and col. 5 line 65 – col. 6 line 5) .

15.   Regarding claims 12 and 27, Suits in view of Smirnov and French further show where in response to execution of said at least one operator (Smirnov col. 13 lines 39 – 43)., the job manager module is configured to establish at least one job, the at least one job being executable by at least one of said customization module or the rendering engine module (Smirnov col. 13 lines 4 - 50).

16.   Regarding claims 13 and 28, Suits in view of Smirnov and French further show where in response to execution of said at least one operator, the job manager module is configured to establish a plurality of jobs in a job dependency graph (French col. 4 lines 10 – 16, col. 5 lines 11 – 30, col. 6 lines 60 - 66, and Fig. 2), each job being executable by at least one of said customization module or the rendering engine module, and select ones of the jobs in the graph for execution (French col. 5 lines 26 – 41).

17.   Claims 14, 15, 29 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Suits in view of Smirnov and French as applied to claims 13 and 28 above, and further in view of Horvitz et al. (US 6,232,974 B1), hereafter Horvitz.

18.   Regarding claims 14 and 29, Suits in view of Smirnov and French show claims 13 and 28.

        Suits in view of Smirnov and French do not show where the job manager module is configured to select ones of the jobs for execution in relation to respective job cost values associated with the respective jobs.

        Horvitz shows where the job manager module is configured to select ones of the jobs for execution in relation to respective job cost values associated with the respective jobs (Abstract, Fig. 9).

        It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Suits in view of Smirnov and French with that of Horvitz in order to improve resource utilization and processing speed.

19.   Regarding claims 15 and 30, Suits in view of Smirnov and French and Horvitz further show where the job manager module is configured to assign respective job cost values in relation to an estimate of server resources used during execution of the associated jobs (Horvitz, Abstract, Fig. 9).

Conclusion

        Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Frink whose telephone number is (571) 272-9686. The examiner can normally be reached on M-F 7:30AM - 5:00PM EST; off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Frink

(571) 272-9686

/Andrew Caldwell/
Supervisory Patent Examiner, Art Unit 2142